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ATTY DOCKET 53951-055

AMENDMENTS

Amendments to the Specification

Please enter the following amendments to the last paragraph on page 18, which continues onto page 19 with the following, which shows the changes.

A' In a system where the components of a multiple input alarm system may only need to communicate with each other when conditions reach an abnormal status, the audibility of a given signal may pose a problem. The particular alarm system application, therefore, may provide an inoffensive context for using acoustic signals to communicate between components; a sort of "chirp network" to interconnect the functional components of the system. In fact, the audibility of communication signals may provide a benefit. For example, an attendant called to a location by a remote-station alarm may be greeted not only by a user interface indicating the nature of the problem but also by the sending unit's characteristic audio signal. This may reinforce the output from the user interface increasing comprehension by the attendant of the alarm condition that occurred.

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✓  
Please replace the abstract with the following, which is marked  
to show changes.

A<sup>2</sup>

One of the most significant safety concerns in the automation of extracorporeal blood treatments such as dialysis is the risk of blood leakage. Extracorporeal blood treatment systems draw blood at such a high rate that a loss of integrity in the blood circuit can be catastrophic. There are a number of mechanisms for detecting and preventing leaks and/or air infiltration, but none is perfect. According to the present invention, multiple inputs are combined to provide greater security against leakage and/or air infiltration by providing sensors for external presence of liquid (plasma, replacement fluid, blood, etc.) outside a fluid circuit and infiltration of air or bubbles into the fluid circuit. ~~the probability of a leak, its seriousness, the amount of time the leak condition has persisted without a response, and other factors may be used to control escalation of multiple types of alarms. In a simple embodiment, for example, there may be a staged audio signal that has a certain loudness and tonal quality when a leak is first detected and becomes more conspicuous as time goes by without a reset response from a user.~~